



Evaluating the Policy Impact of Regional Public Service Agency on Vocational Education Quality in East Java

Mufarrihul Hazin¹, Muhammad Turhan Yani², Suyatno Ladiqi³, Nur Wedia Devi Rahmawati⁴

^{1,2}Universitas Negeri Surabaya, Surabaya, Indonesia

³Universiti Sultan Zainal Abidin, Terengganu, Malaysia

⁴Universitas Islam Negeri Syarif Hidayatullah Jakarta, Banten, Indonesia

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ABSTRACT

Background: Vocational education is expected to produce graduates who are ready for the labor market; however, gaps between school learning and industry demands remain a persistent issue. Policy interventions such as BLUD have been introduced to enhance institutional flexibility, yet their impact on student outcomes is not fully understood. **Objective:** This study aims to examine the effect of BLUD policy implementation on students' job readiness by incorporating key educational process variables, including learning facilities, teaching effectiveness, practical activities, and potential development. **Methods:** A quantitative approach with a causal-explanatory design was employed. Data were collected from 583 students from 21 vocational school. The model includes six latent variables with 19 indicators and was analyzed using PLS-SEM. **Findings:** The results show that BLUD policy has strong effects on educational processes, particularly on learning facilities ($\beta = 0.728$), teaching effectiveness ($\beta = 0.662$), practical activities ($\beta = 0.636$), and potential development ($\beta = 0.760$). The model demonstrates high explanatory power ($R^2 = 0.725$). **Research Implications:** These findings highlight the need to shift policy focus from infrastructure provision to strengthening experiential learning, industry-based practice, and student development programs. Optimizing BLUD flexibility should prioritize practice-based learning systems to enhance employability outcomes. **Originality:** This study provides a novel perspective by demonstrating that vocational education effectiveness is driven more by process-based factors than structural inputs, challenging infrastructure-centered policy approaches.



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INTRODUCTION

Vocational education in Indonesia is currently undergoing a fundamental transformation aimed at aligning the quality of graduates with the dynamic needs of the global industry. As institutions bearing the strategic responsibility of producing a skilled workforce, Vocational High Schools (SMK) are expected to contribute significantly to reducing unemployment and strengthening national competitiveness. However, empirical evidence indicates a persistent mismatch between these expectations and actual outcomes. Data from the Central Bureau of Statistics (BPS) as of February 2022 shows that the open unemployment rate among SMK graduates reached 10.38%, exceeding that of general secondary school (SMA) graduates at 8.35% (Aini & Purba, 2022). This condition reflects structural challenges in vocational education, particularly related to the relevance and quality of training provided.

These challenges are rooted in several long-standing issues, including inadequate practical facilities, rigid and less adaptive curricula, and limited financial capacity to support industry-relevant learning environments (Situmeag, 2023). In many cases, schools struggle to keep pace with rapid technological advancements in the industrial sector, resulting in a gap between the competencies of graduates and labor market demands. Studies have shown that strengthening industry partnerships, implementing teaching factory (TeFa) models, and adopting flexible funding mechanisms can significantly improve the relevance of vocational education to workforce needs (Safira & Azzahra, 2022; Samala et al., 2024). In addition, broader analyses of organizational learning and institutional adaptability highlight the importance of continuous innovation and responsiveness in education systems to remain aligned with changing environments (Alfaro-Rosas et al., 2023).

In response to these structural problems, the Indonesian Government introduced Presidential Instruction Number 9 of 2016 concerning the Revitalization of Vocational High Schools. This policy aims to strengthen linkages between education and industry, improve curriculum relevance, and enhance institutional capacity. One of the key policy instruments supporting this initiative is the implementation of the Regional Public Service Agency (BLUD) financial management system. The legal basis for this system is Minister of Home Affairs Regulation (Permendagri) Number 79 of 2018, which provides flexibility for public service units, including SMKs, to manage their finances independently. Through this mechanism, schools are allowed to utilize revenues generated from production units and teaching factories (TeFa) to support educational activities (Muaddab et al., 2024; Susila & Tyas, 2022). BLUD itself is defined as a financial management pattern that allows flexibility as an exception to general regional financial management rules in order to improve public service delivery (Saudi, 2022).

The implementation of BLUD represents a paradigm shift in the governance of vocational education, moving from a rigid bureaucratic model toward a more flexible and performance-oriented system. In this framework, SMKs are no longer entirely dependent on government funding sources such as the Regional Budget (APBD) or School Operational Assistance (BOS), which are often insufficient to meet the high costs of vocational training (Disas, 2018). Instead, schools are encouraged to generate their own income and reinvest it into improving educational quality. This flexibility enables schools to procure practical materials, upgrade equipment, maintain facilities, and recruit industry practitioners as “productive teachers” to enhance the relevance of instruction (Puri & Wicaksono, 2023). Evidence suggests that financial autonomy, when supported by strong accountability mechanisms, can lead to improved institutional performance and more effective alignment with labor market needs (Jamali et al., 2022; Saputro et al., 2021).

From a theoretical standpoint, evaluating the effectiveness of such policy innovations requires a comprehensive framework. The CIPP (Context, Input, Process, Product) evaluation model developed by Stufflebeam (2007) provides a systematic approach to assessing educational programs. The “Context” dimension examines the relevance of policy objectives, the “Input” dimension evaluates resource availability such as facilities and teacher competence, the “Process” dimension focuses on the implementation of teaching and learning activities, and the “Product” dimension assesses outcomes such as student competence and job readiness (Harjono et al., 2024; Suryati et al., 2023). This model has been widely used to evaluate educational policies due to its ability to capture both structural and outcome-oriented aspects of program implementation.

Despite the growing body of research on BLUD, most studies have concentrated on financial management, governance accountability, and transparency (Tauhid et al., 2022). While these aspects are important, they do not fully reflect the effectiveness of the policy in improving the quality of education at the student level. There remains a significant gap in understanding how BLUD implementation impacts students as the primary beneficiaries of vocational education. Without incorporating student perspectives, policy evaluation risks overlooking the realities of classroom instruction and practical learning environments (Harjono et al., 2024). Empirical studies indicate that student perceptions of facilities, instructional quality, and practical experiences play a crucial role in shaping motivation, learning outcomes, and career readiness (Ahmad, 2020; Saputro et al., 2021).

This study seeks to complement this by developing a model that integrates policy, educational processes, and learning outcomes within a single analytical framework. Specifically, this study analyzes the impact of BLUD implementation on student work readiness by considering the mediating roles of Learning Facilities, Teaching Effectiveness, Practical Activities, and Potential Development. This approach allows for a more comprehensive understanding of the mechanisms by which education policy operates in the context of vocational education.

To address these limitations, this study adopts a student-centered evaluation approach that focuses on how BLUD policy implementation translates into perceived improvements in educational quality. By integrating student perceptions into the evaluation framework, this study aims to provide a more comprehensive understanding of policy impact. East Java Province is selected as the research locus due to its status as a pioneer in implementing the SMK BLUD model, with a significant number of pilot schools that have expanded rapidly since 2024. This context provides a valuable opportunity to examine the effectiveness of BLUD implementation in a region with relatively advanced policy adoption.

The objective of this study is to analyze the direct and indirect effects of BLUD policy implementation on vocational education quality about students’ job readiness by incorporating key educational process variables, including learning facilities, teaching effectiveness, practical activities, and potential development, within a structural equation modeling framework. These dimensions are aligned with broader efforts to improve the quality of vocational education and contribute to the achievement of Sustainable Development Goals (SDGs), particularly in ensuring inclusive and equitable quality education and promoting decent work opportunities (Perdana, 2019; Rahman et al., 2021).

METHOD

Research Design

This research uses a quantitative approach with a causal - explanatory design. research design) to analyze the effect of BLUD policy implementation on vocational high school students' work readiness. This design was chosen because the study aims to test the causal relationship between variables, both directly and indirectly through mediating variables.

Population and Sample

The population in this study was all students of Vocational High Schools (SMKN) that had implemented the BLUD policy. The unit of analysis was the individual student as the direct recipient of educational services. The sample size used in this study was 583 respondents from 21 schools, obtained using the proportional random sampling technique. This technique was used to ensure that the sample proportionally represented various skill programs and grade levels.

Variables and Measurement

This study involves six main latent variables, namely: BLUD as an exogenous variable, Learning Facilities (LFD), Teaching Effectiveness (TCD), Practical Activities (PAD), and Potential Development (PDD) as mediating variables, as well as Job Readiness (JRD) as an endogenous variable. All variables were measured using a 4-point Likert scale, with responses ranging from 1 (strongly disagree) to 4 (strongly agree). Each construct was operationalized through several reflective indicators. The BLUD variable was measured using indicators of financial management flexibility and school independence. Facilities include the adequacy of facilities and the condition of practice facilities. Teaching Effectiveness measures the clarity of material delivery and teacher competence. Practical Activities reflect practical work experience and involvement in the industrial world. Potential Development measures the development of interests, talents, and soft skills. student skills. Meanwhile, Job Readiness is measured through indicators of skill mastery, self-confidence, and readiness to enter the world of work.

Data Collection Procedure

Data were collected using a structured questionnaire distributed directly to respondents. Prior to use, the research instrument underwent a content validation process validity through expert judgment and limited trials (pilot testing) to ensure the clarity and suitability of items to the research context. Data collection was conducted using a distributed GForm accompanied by an official letter. The data collection process adhered to ethical research principles, with respondents being provided with an explanation of the research objectives and guaranteed confidentiality of their responses. Participation was voluntary and free from pressure or coercion.

Data Analysis Technique

Data analysis using SEM-PLS with SmartPLS goes through two stages, namely: (1) Outer Model Evaluation; Testing validity and reliability using outer loading (>0.70), AVE (>0.50), and composite reliability (>0.70). (2) Inner Model Evaluation; testing the relationship between variables using the R^2 value and path coefficient . Next, hypothesis testing was conducted using bootstrapping (5,000 subsamples). The hypothesis was declared significant if the t- statistic ≥ 1.96 and p- value ≤ 0.05 . The analysis also included indirect effects to test the mediating role of the variables LFD, TCD, PAD, and PDD.

RESULTS

A. Descriptive Statistical Analysis

Based on results analysis statistics descriptive, all variables in study This show relative average value high, namely is in the range of 3,155 to 3,404 on the scale four points. This indicates that in a way general respondents own positive perception to implementation BLUD policies and quality of the educational process vocation that they experience.

Table 2. Descriptive Statistical Analysis

Variable	N	Min	Max	Mean	Std. Dev
BLUD	583	1	4	3.155	0.574
LFD	583	1	4	3.169	0.627
TCD	583	1	4	3.264	0.569
PAD	583	1	4	3.404	0.597
PDD	583	1	4	3.200	0.610
JRD	583	1	4	3.286	0.565

Variables with highest average value is Practical Activities (PAD) amounting to 3,404. Findings This show that activity practices, such as practice Work industry, teaching factory, and simulation Work real, is the most dominant

aspect felt benefits by students. This is confirmed that learning based experience (experiential learning) is the inner core education vocational. Next, the variables Job Readiness (JRD) own the average value is 3.286, which shows that student in a way general feel Enough Ready For entering the world of work. The height mark This indicates that the ongoing educational process has capable form competence relevant work.

Variables Teaching Effectiveness (TCD) has an average of 3,264, which shows that effectiveness teaching is in the category well, though no become the most dominant factor compared to practice. Meanwhile that, variable Potential Development (PDD) own the average value is 3,200, which indicates that development potential student through activity additional also running Enough Good.

On the other hand, the variable Learning Facilities (LFD) own average value of 3,169, and BLUD of 3,155. Although both is at in category good, the value relatively lower compared to variables others, which indicates that facilities and implementation policy Still own room for optimization more carry on. Standard value deviation all over variables is in the range of 0.565 to 0.627, which indicates level relative data variation low. This indicates that perception respondents tend homogeneous, so that the data can be considered stable and representative.

B. Evaluation of the Measurement Model (Outer Model)

Accurately represented the latent construct. Testing included convergent validity, construct reliability, and discriminant validity.

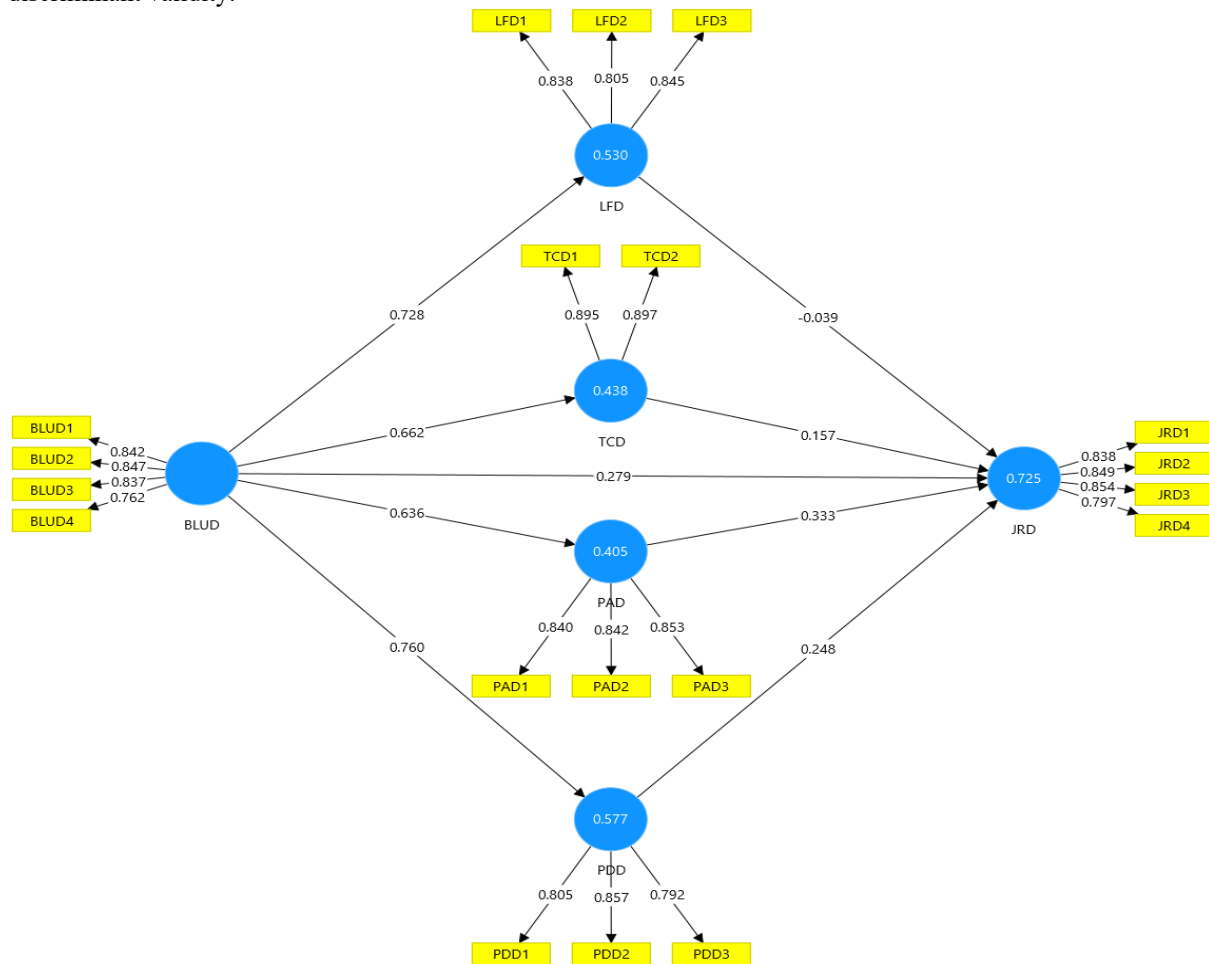


Figure 1. Outer Model

The results of the analysis show that all indicators have outer values. The loading value is above the 0.70 threshold. For the BLUD variable, the loading value ranges from 0.762 to 0.847, indicating that the indicator can represent the policy construct well. Learning Variable Facilities (LFD) has a loading value between 0.805 and 0.845, indicating that the learning facilities aspect is measured consistently. In the Teaching variable Effectiveness (TCD), the loading value even reached 0.895 to 0.897, which indicates the strength of the indicator in representing teaching effectiveness.

Table 3. Loading Factor

Construct	Indicator	Loading
BLUD	BLUD1	0.842
	BLUD2	0.847
	BLUD3	0.837
	BLUD4	0.762
LFD	LFD1	0.838
	LFD2	0.805
	LFD3	0.845
TCD	TCD1	0.895
	TCD2	0.897
PAD	PAD1	0.840
	PAD2	0.842
	PAD3	0.853
PDD	PDD1	0.805
	PDD2	0.857
	PDD3	0.792
JRD	JRD1	0.838
	JRD2	0.849
	JRD3	0.854
	JRD4	0.797

Next, the Practical variable Activities (PAD) shows a loading value between 0.840 and 0.853, while Potential Development (PDD) is in the range of 0.792 to 0.857. The Job Variable Readiness (JRD), as the main variable, has loading values ranging from 0.797 to 0.854. All these values exceed the minimum required limit, thus concluding that all indicators have good convergent validity.

Table 4. AVE, CR, Cronbach Alpha

Variables	AVE	CR	ALPHA
BLUD	0.682	0.896	0.846
LFD	0.692	0.871	0.777
TCD	0.802	0.890	0.755
PAD	0.711	0.881	0.798
PDD	0.689	0.869	0.774
JRD	0.705	0.905	0.861

In terms of reliability, all constructs meet the Composite criteria. Reliability above 0.70 and Average Variance Extracted (AVE) above 0.50. This indicates that the constructs used in this study have high internal consistency and adequately explain the indicator variance. Therefore, all variables in the model are valid and reliable, making it suitable for further analysis at the structural model stage.

C. Structural Model Evaluation (Inner Model)

Once the measurement model is declared to meet the criteria, the next stage is to evaluate the structural model to see the strength of the relationship between the latent variables. This evaluation is carried out through analysis of the R-Square (R²) value and the path coefficient.

Table 5. R-Square Values

ENDOGENOUS VARIABLE	R²	INTERPRETATION
LFD	0.530	Moderate
TCD	0.438	Moderate
PAD	0.405	Moderate
PDD	0.577	Moderate – Strong
JRD	0.725	Strong

The results of the analysis show that the R² value for the Learning variable Facilities (LFD) of 0.530, meaning that 53% of the variation in learning facilities can be explained by the implementation of BLUD policies. The Teaching Variable Effectiveness (TCD) has an R² value of 0.438, while Practical Activities (PAD) of 0.405. The Potential

Development (PDD) variable showed an R^2 value of 0.577, which indicates the model's ability to explain student potential development quite strongly.

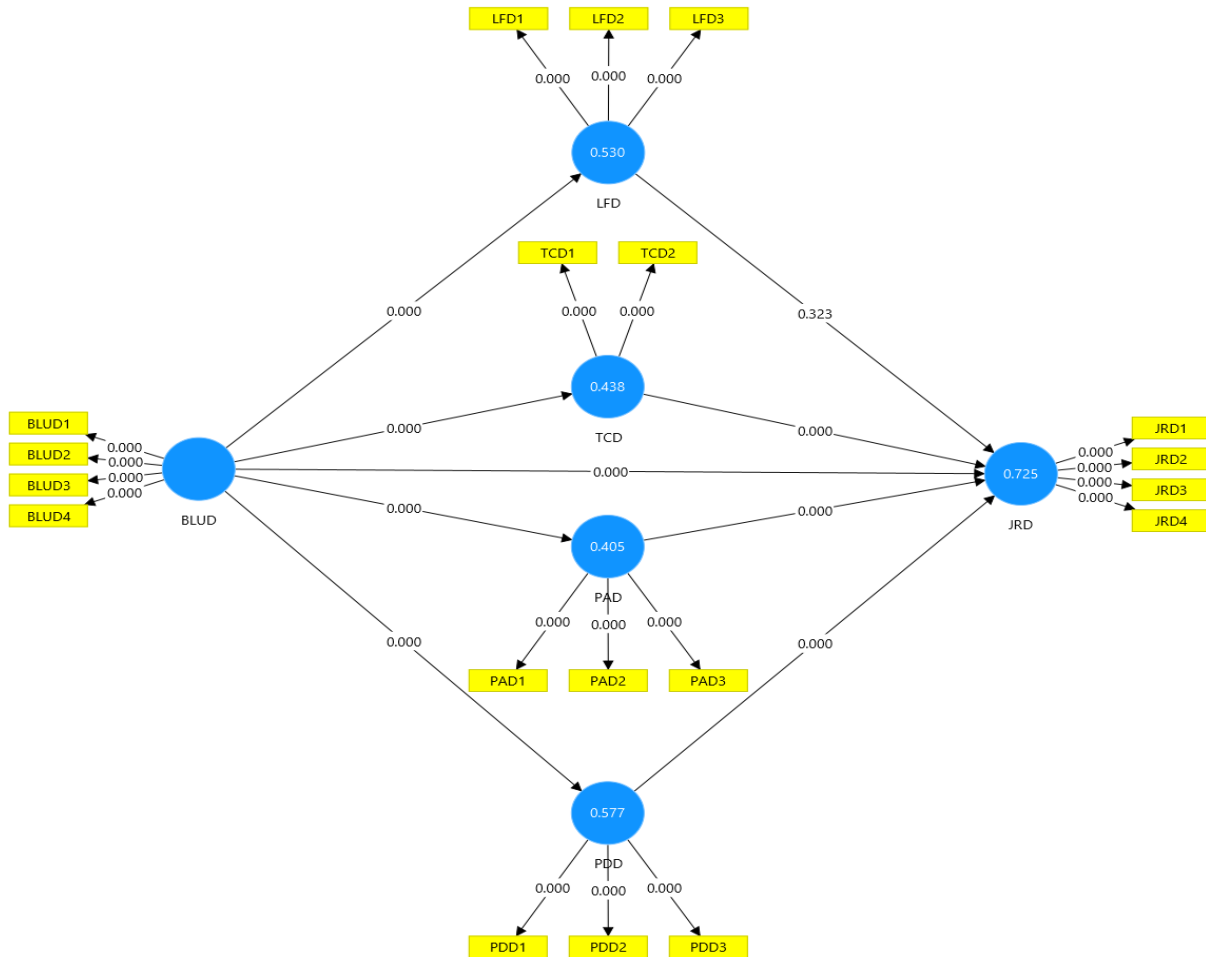


Figure 2. Inner Model

The main variable, namely Job Readiness (JRD) has an R^2 value of 0.725. This value indicates that 72.5% of the variation in student work readiness can be explained by the combination of BLUD, LFD, TCD, PAD, and PDD variables. Thus, this research model has high (substantial) explanatory power, indicating that the variables used are the main determinants in shaping vocational high school students' work readiness.

D. Results of the Test of the Relationship Between Variables (Path Coefficient)

Path coefficient analysis shows that the implementation of the BLUD policy has a positive and strong influence on all variables of the educational process. The Influence of BLUD on Learning Facilities (LFD) has a coefficient of 0.728, which shows that flexibility in financial management can significantly improve the quality of learning facilities.

In addition, BLUD also has an impact on teaching. Effectiveness (TCD) with a coefficient of 0.662, as well as on Practical Activities (PAD) was 0.636. The greatest influence was seen in the relationship between Regional Public Service Agency (BLUD) and Potential Development (PDD), with a coefficient value of 0.760. This indicates that BLUD policies have a very strong contribution in encouraging the development of student potential, both through academic and non-academic activities.

Directly, BLUD also has an influence on Jobs Readiness (JRD) with a coefficient of 0.279, which is in the moderate category. This indicates that the BLUD policy not only works through mediating variables but also has a direct influence on student work readiness.

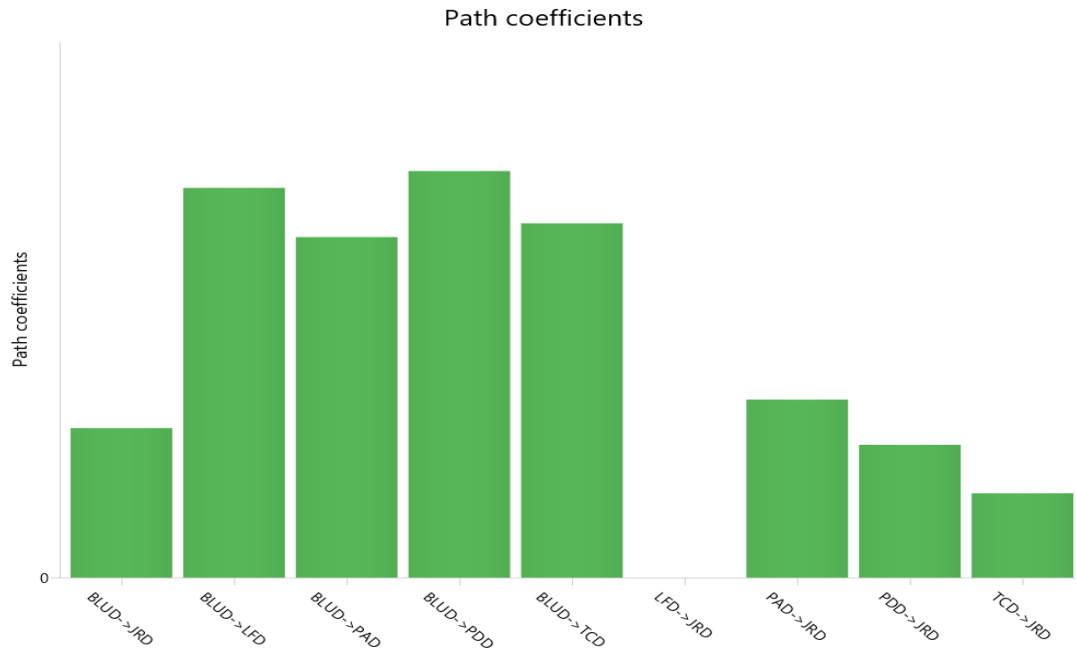


Figure 3. Path Coefficient

Table 6. Path Coefficient

Path	Coefficient	Interpretation
BLUD → LFD	0.728	Strong
BLUD → TCD	0.662	Strong
BLUD → PAD	0.636	Strong
BLUD → PDD	0.760	Very Strong
BLUD → JRD	0.279	Moderate
LFD → JRD	-0.039	Not significant
TCD → JRD	0.157	Weak
PAD → JRD	0.333	Moderate
PDD → JRD	0.248	Moderate

However, the results of the analysis show interesting findings on the Learning variable. Facilities (LFD). Effect of LFD on Jobs Readiness (JRD) has a coefficient value of -0.039, indicating that learning facilities do not have a significant direct effect on students' work readiness. This finding indicates that the presence of facilities alone is insufficient to improve work readiness without an effective learning process and relevant practical experience.

In contrast, the Practical variable Activities (PAD) shows the strongest influence on Job Readiness with a coefficient of 0.333. This confirms that practical activities, such as industrial work experience, work simulations, and teaching factory, is the main factor in shaping students' work readiness.

Potential Development (PDD) variable also shows a significant influence on Job Readiness with a coefficient of 0.248. This indicates that the development of student potential through extracurricular activities, additional training, and strengthening of soft skills Skills have an important contribution in improving work readiness. Meanwhile, Teaching Effectiveness (TCD) has a smaller impact on Job Readiness, with a coefficient of 0.157. This shows that although effective teaching is important, in the context of vocational education, practical experience remains a more dominant factor.

E. Mediation Analysis

Model analysis shows that the influence of BLUD on Job Readiness does not only occur directly, but also through mediating variables, especially Practical Activities (PAD), Potential Development (PDD), and Teaching Effectiveness (TCD). The BLUD → PAD → JRD and BLUD → PDD → JRD pathways demonstrate the existence of a partial mediation mechanism, where educational process variables act as a bridge for policy transformation into educational outcomes.

Table 7. Mediaton Analysis

Path	Mediation Type	Interpretation
BLUD → PAD → JRD	Partial	Significant
BLUD → PDD → JRD	Partial	Significant
BLUD → TCD → JRD	Partial	Weak but relevant
BLUD → LFD → JRD	None	Not significant

On the contrary, Learning Facilities (LFD) does not show a significant mediating role in the relationship between BLUD and Job Readiness. This reinforces previous findings that facilities only serve as a supporting factor, not a primary determinant, in improving work readiness. Thus, this research model shows that the educational process has a more important role than structural input in determining the outcomes of vocational education.

F. Synthesis of Research Results

Overall, the results of this study indicate that the implementation of the BLUD policy has a significant impact on improving the quality of the educational process in vocational schools. However, in shaping students' work readiness, the most determining factors are practical activities and potential development, not learning facilities.

This model indicates that the success of vocational education is not only determined by the availability of resources, but by how these resources are optimized through an experiential learning. With a high R² value on the Job variable Readiness, this study successfully demonstrated that the developed model has good predictive power and is relevant to explain the phenomenon of student work readiness in the context of BLUD policy.

DISCUSSION

The results of this study show that the implementation of BLUD policies has a very important role as a system driver in improving the quality of vocational education (Alava et al., 2023). Although descriptively the level of BLUD implementation is in the fairly good category, the results of the structural analysis indicate that BLUD has a strong influence on all educational process variables, including learning facilities, teaching effectiveness, practical activities, and student potential development (Hidayat et al., 2024). This finding confirms that policies do not always work directly on output, but through strengthening institutional capacity and internal school processes (Podlesny, 2023).

Theoretically, these findings align with the policy implementation perspective, which emphasizes the importance of organizational capacity in determining policy success (Jamaludin et al., 2023). In this regard, the flexibility in financial management provided by the Regional Public Service Agency (BLUD) allows schools to be more adaptive to the dynamic needs of vocational learning (Podlesny, 2023; Suranto et al., 2022). Thus, BLUD can be understood as an instrument of institutional transformation, driving change from a rigid education system to a more responsive and performance-oriented.

One of the most significant findings in this study is the dominant role of practical activities in improving students' work readiness (Spanjaard et al., 2018). This variable not only had the highest mean value in the descriptive analysis but also showed the strongest influence in the structural model (Gualtieri et al., 2018a). This indicates that practice-based learning experiences, such as industrial work experience, teaching factory, and real work simulation, are key factors in shaping students' work competencies (Mahmud et al., 2019; Spanjaard et al., 2018).

These findings strengthen the experiential approach. Learning emphasizes that effective learning occurs through hands-on experience. In the context of vocational education, practical experience not only improves technical skills but also shapes work attitudes, self-confidence, and readiness for the world of work (Gualtieri et al., 2018a; Suranto et al., 2023). Therefore, the success of vocational education depends heavily on the extent to which schools can provide authentic and relevant learning experiences tailored to industry needs.

On the other hand, the effectiveness of teaching does have a positive effect on job readiness, its contribution is relatively smaller compared to practical activities (Mongkhonvanit, 2017). This indicates a shift in the role of teachers in vocational education, from simply conveying material to facilitating learning, connecting theory with practice. In other words, teaching quality remains important, but it is no longer the primary factor in determining students' job readiness (Fang, 2025).

The most interesting finding, which provides a theoretical contribution, is the insignificant effect of learning facilities on job readiness. Although students rated the facilities as good descriptively, the analysis showed that they had no direct impact on job readiness. This indicates that the presence of facilities alone is not sufficient to produce quality educational outcomes if they are not optimally integrated into the learning process (Gualtieri et al., 2018b; Saputro et al., 2021). From a human capital theory perspective, these findings suggest that investment in education must be able to generate productive competencies. Facilities are merely inputs, and they do not automatically become productive capital without a transformation process through learning and practice.

Furthermore, the results of this study indicate that the influence of BLUD on job readiness is largely mediated by educational process variables, particularly practical activities and student potential development. This confirms that educational policy operates through a transformation mechanism, where policy inputs are processed through the educational process before producing job readiness outputs (Hazin and Devi Rahmawati, 2023; Jingwei, 2025). This model demonstrates that vocational education is a complex and multi-layered system that cannot be understood solely through direct relationships between variables.

Overall, this study offers a model for transforming vocational education that places the learning experience at the center of the educational process. In this model, the BLUD policy serves as an enabler, with practical activities as the core driver, and development of potential as a reinforcing factor. Meanwhile, facilities and teaching act as supporting factors that strengthen the effectiveness of the process, but do not directly determine the final result (Brownie et al., 2024). These findings have important implications for developing vocational education policies. The focus of policy should not only be on infrastructure development, but also on strengthening practice-based learning systems and developing student potential. Thus, the transformation of vocational education should be not only structural but also substantive, producing graduates who are truly prepared for the world of work (Maarof et al., 2019).

CONCLUSION

This study investigates the impact of BLUD policy implementation on students' job readiness in vocational education by incorporating key educational process variables, namely learning facilities, teaching effectiveness, practical activities, and potential development. The findings reveal that BLUD functions as a systemic enabler that significantly strengthens educational processes, with strong effects on learning facilities ($\beta = 0.728$), teaching effectiveness ($\beta = 0.662$), practical activities ($\beta = 0.636$), and potential development ($\beta = 0.760$). The model demonstrates high explanatory power ($R^2 = 0.725$), indicating that the proposed variables effectively explain variations in students' job readiness.

Among the variables examined, practical activities emerge as the most influential factor in shaping job readiness ($\beta = 0.333$), followed by potential development ($\beta = 0.248$) and teaching effectiveness ($\beta = 0.157$). In contrast, learning facilities do not show a significant direct effect ($\beta = -0.039$), suggesting that infrastructure alone is insufficient to enhance employability outcomes. These findings confirm that the impact of BLUD policy operates primarily through mediating processes, particularly experiential learning and student development, rather than direct structural inputs.

Theoretically, this study contributes by highlighting that vocational education effectiveness is driven more by process-based factors than by resource availability, challenging infrastructure-centered policy approaches. Practically, the findings emphasize the need to prioritize practice-based learning, strengthen student development programs, and optimize the use of BLUD flexibility to support meaningful learning experiences. Ultimately, vocational education transformation depends not on the availability of resources, but on the system's ability to convert those resources into relevant and experience-based learning that prepares students for the labor market.

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AUTHOR CONTRIBUTION STATEMENT

MH, MTY, and SL contributed to the research design and the development of the questionnaire instruments. MH and MTY conducted the field data collection and descriptive statistical analysis. SL was responsible for the policy literature review and the synthesis of the regional impact discussion. All authors have reviewed and approved the final version of this article.

AI DISCLOSURE STATEMENT

The authors utilized AI-powered data analysis tools to assist in large-scale survey data cleaning and Indonesian syntax checking within this manuscript. Following the use of these tools, the authors conducted an in-depth review, substantial editing, and manual data validation to ensure information accuracy. The authors take full responsibility for all content published in this article. The authors declare that this research was conceptualized, written, and critically edited by a human author team.

***Mufarrihul Hazin (Corresponding Author)**

Universitas Negeri Surabaya,

Jl. Lidah Wetan, Kec. Lakarsantri, Kota Surabaya, Jawa Timur 60213, Indonesia

Email: mufarrihulhazin@unesa.ac.id

Muhammad Turhan Yani

Universitas Negeri Surabaya,

Jl. Lidah Wetan, Kec. Lakarsantri, Kota Surabaya, Jawa Timur 60213, Indonesia

Email: muhammادتurhan@unesa.ac.id

Suyatno Ladiqi

Universiti Sultan Zainal Abidin,

Kampus Gong Badak, Gong Badak 21300 Kuala Nerus, Terengganu Darul Iman, Malaysia

Email: suyatno@unisza.edu.my

Nur Wedia Devi Rahmawati

Jl. Ir. H. Juanda No. 95, Ciputat, Kota Tangerang Selatan, Banten.

Universitas Islam Negeri Syarif Hidayatullah Jakarta

Email: nurwediadevirahmawati@gmail.com
